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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,028	03/14/2005	Ian Heathcote	65856-0062	6818
10/29/759012/09/2008 RADER, FISHMAN & GRAUER PLLC 39533 WOODWARD AVENUE SUITE 140 BLOOMFIELD HILLS, MI 48304-0610				
EXAMINER				
DIAZ, THOMAS C				
ART UNIT		PAPER NUMBER		
3656				
MAIL DATE		DELIVERY MODE		
12/09/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/502,028

**Applicant(s)**

HEATHCOTE, IAN

**Examiner**

THOMAS DIAZ

**Art Unit**

3656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_

## DETAILED ACTION

### ***Status of claims***

The reply filed on 08/25/2008 is acknowledged. Applicant has amended claims 1, 3, 7, 8, 12, 16 -18, 21, 22 and 27, and cancelled claims 2, 5, 6, 26 and 28. Accordingly, claims 1, 3, 4, and 7-25 remain pending in this application.

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1,7,17,18,21-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10501821. Although the conflicting claims are not identical,

they are not patentably distinct from each other because the conflicting claims are directed towards a gear shifting mechanism which as interpreted by the examiner includes most of the features and structure of the gear shifting cassette unit claimed in the current application.

For example, claims 1, 7 of the current application are directed to a gear shifting cassette unit which comprises a housing, a traversing member and a coupling. This is clearly recited in the copending application claims in which the applicant claims a shift selector element corresponding to the coupling and a support which holds the selector element along with other analogous structure to the gear shifting cassette such as a pressure spring, blocking element, and shift rails. The copending application make no mention of a housing, however, it would be obvious that such a structure would have a housing and also read in light of the specification it is clear that the inventions are appear identical in structure.

Claims 17, and 18 of the current application are directed towards a blocking member for blocking the non-selected shift rails from moving which corresponds to the blocking element discussed in claims 13,14, and 15 of the copending application, which also performs the same function.

Claims 21-24 of the current application are directed towards shift elements and distances between the shift elements and the shift rails and how the shift elements engage the shift rails. Similar structure and relationships of distances are claimed throughout claims 1-8 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Below are some figures from both the current application and the copending application.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 29,30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Both claims recite "neither the traversing member nor the carrier member rotate to move the shift finger". Based on the specification and the drawings it is unclear how the applicant's device performs this function, since the shift finger is responsible for moving the traversing member and the carrier member and not the other way around. Perhaps changing "shift finger" to "shift element" would clarify the problem since the shift element is moved by the carrier member and traversing member.

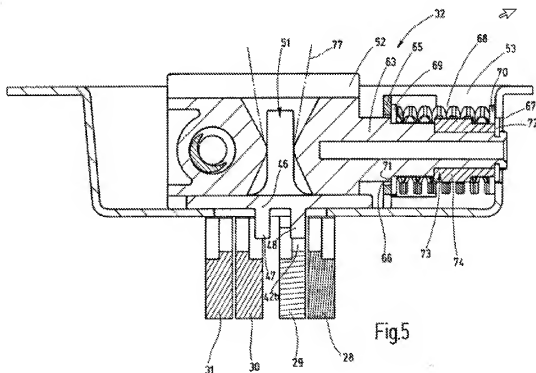
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1,3,4,7-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "a coupling" twice and it is unclear whether the applicant intends to have two couplings or if the applicant is referring to the same coupling.

Claim 8 recites “the direction” and it is unclear which direction the applicant is referring to. This issue was mentioned in the first office action.



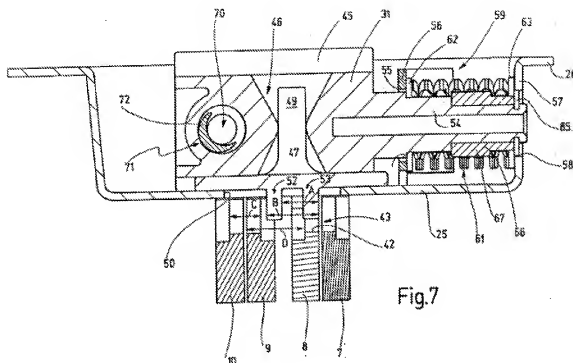


Fig.7

Figure ii- Current application.

**Claim Rejections - 35 USC § 102**

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

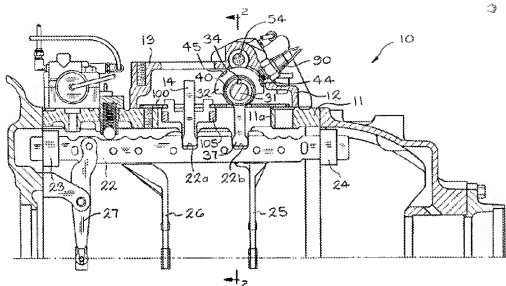
6. Claims 1, 2, 4-7, 15, 21, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Willford et al. (US patent 5566579), see figures below.

**Regarding claim 1,**

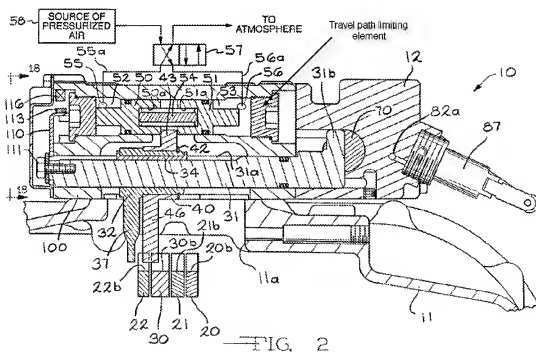
Willford et al. discloses a similar device comprising:

- a cassette housing (fig.1, 13) comprising bearing means (fig.2, 50 or 51) for movably supporting at least one shift element (fig.2, 37) for engaging and moving the shift rails and a coupling (fig.2 34) for connecting the shift element to a shift finger (fig.2, 54); and
- mounting means (fig. 1, 100) for fixedly securing the cassette housing on a transmission housing in a position where the at least one shift element can be moved to selectively engage connecting members of the shift rails;
- wherein the bearing means comprises a traversing member (fig.2, 50 or 51) located in the cassette housing and movable in a first orthogonal direction for selecting a shift rail, and a carrier member (fig.2, 32; the member rotates in second orthogonal direction) supported by the traversing member and moveable in a second orthogonal direction for axially moving a selected one of the shift rails and being provided with the at least one shift element at one side thereof, the carrier member being provided with a coupling (fig.2, 34) for connecting the carrier member to a shift finger in the first orthogonal direction and the second orthogonal direction.





**Figure iii- Willford et al.'s device.**



**Figure iv- Willford et al.'s device.**

***Regarding claim 3,***

The mounting means is a flange (fig.1, 100).

***Regarding claim 4,***

The applicant claims a shift element which corresponds to shift element (fig.2, 37), which protrudes through an opening (see fig.2) in the housing for engaging the shift rails.

***Regarding claim 7,***

The applicant claims said traversing member comprising two opposite guiding surfaces which correspond to the two opposite surfaces of the piston element (fig.2, 51) which are in sliding engagement with inner surfaces of the casing facing each other.

***Regarding claim 15,***

The applicant claims a travel path limiting element being associated with a traversing member which corresponds to the structure labeled by the examiner in figure 2. This structure limits the before said traversing member (fig.2, 51 or 50) from moving laterally more than a certain distance.

***Regarding claim 21,***

Applicant claims two shift elements having the shape of tongues which extend into the shift rails and are spaced apart from each other. These shift elements correspond to the shift elements of the prior art (fig.2, 37 and 46) which have the shape of tongues and extend into the shift rails and are also spaced apart from each other.

***Regarding claim 27,***

Willard et al. discloses a similar device comprising:

- a gear shifting mechanism (fig.2) comprising an actuation unit (fig.2, pistons) which has an actuation unit housing capable of being mounted on the transmission housing. The actuation unit also has a shift finger (fig.2, 54) which is movable in two axial directions for both selecting a shift rail and moving it.
- a gear shifting cassette housing (fig.2, 12) having a mounting means (fig.2, 100) for fixing the housing together with the transmission housing (fig.2, 11).
- a traversing member located inside the cassette housing which corresponds to the piston element (fig.2, 50 or 51),
- a carrier member corresponding to the element (fig.2, 32) which is supported by the traversing member and movable in the axial direction (by rotating the member moves in the axial direction) and being provided with the shift elements (fig. 2, 37 and 46). These shift elements protrude through an opening the casing as depicted in fig. 1 and fig. 2. The carrier member has a coupling as discussed above corresponding to the element (fig.2, 34) which connects the carrier member to the shift finger (fig.2, 54).

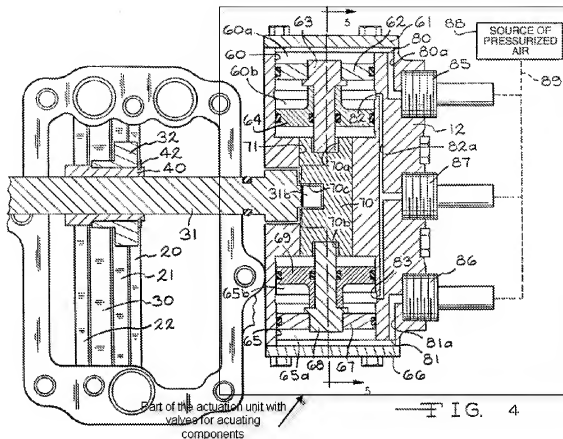


Figure v- Willford et al.'s device.

7. Claims 1, 7-20 rejected under 35 U.S.C. 102(b) as being anticipated by Meyers et al. (USP 4892001).

*Regarding claim 1, Meyers et al. discloses a similar device comprising:*

- a cassette housing (fig.2, 17) comprising bearing means (fig.2, 50 and 68) for movably supporting at least one shift element (fig.2, 37) for engaging and moving the shift rails and a coupling (fig.2 22) for connecting the shift element to a shift finger (fig.2, 13); and

- mounting means (fig. 1, 18) for fixedly securing the cassette housing on a transmission housing in a position where the at least one shift element can be moved to selectively engage connecting members of the shift rails;
- wherein the bearing means comprises a traversing member (fig.2, 50 and 68) located in the cassette housing and movable in a first orthogonal direction for selecting a shift rail, and a carrier member (fig.2, ball portion of 13 and lower part beneath the ball) supported by the traversing member and moveable in a second orthogonal direction for axially moving a selected one of the shift rails and being provided with the at least one shift element at one side thereof, the carrier member being provided with a coupling (fig.2, 22) for connecting the carrier member to a shift finger in the first orthogonal direction and the second orthogonal direction.

***Regarding claim 7,***

Meyers et al. discloses the traversing member comprises two opposite guiding surfaces which are in sliding engagement with inner surfaces of the casing facing each other (fig.3, 50 is in sliding engagement with inner surfaces of the casing).

***Regarding claim 8,***

Meyers et al. discloses the traversing member comprising an oblong opening (fig.6, 52) with the carrier member therein.

***Regarding claims 9-11,***

Applicant claims a biasing device associated with the traversing member which corresponds to the compression springs (fig.3, 67 and 72).

***Regarding claim 12,***

Meyers et al. discloses the traversing member having a shaft (fig.3, 68) extending in the first orthogonal direction and carrying the compression spring.

***Regarding claim 13,***

Applicant claims the compression spring being clamped between two pressure disks located on the shaft between respective stop means. Meyers et al. discloses a washer and a nut (fig.3, 66 and inner end of 63) which the examiner interprets as pressure disks which are located on the shaft or pin between the stopping means (fig.3, threads on nut 63 and the shoulder at the washer's position).

***Regarding claim 14,***

Applicant claims that the casing of the cassette unit comprises two abutment means for limiting the travel of the spring means in opposite directions. Meyers et al. teaches the shoulder (fig.3, 71) and the washer (fig.3, 66) which limits the travel of the small spring (fig.3, 72).

***Regarding claims 15,16,***

Meyers et al. discloses a travel limiting element which is associated with the traversing member and is a sleeve located the shaft (see fig.2, 70).

***Regarding claim 17,***

Applicant claims a traversing member comprising a blocking member for blocking the movement of all non-selected shift rails. Meyers et al. discloses end portions (fig.4, 56) of the interlocking bracket which prevent the movement of shift rails depending on the selection made (col.6, lines 42-48).

***Regarding claim 18,***

Applicant claims the blocking member comprising at least one cutout for unblocking the shift rail being selected. Meyers et al. teaches a cut out as depicted in both figure 3 and figure 4 through which the shift finger engages the shift rail being selected.

***Regarding claim 19,***

Applicant claims a slit-like opening in the casing for the transmission which was already disclosed by Willford et al. above. Furthermore, Meyers et al. teaches an opening in the casing (fig.3, 11) as depicted in figure 3 through which the blocking member or end portions extend through.

***Regarding claim 20,***

Applicant claims that the blocking member is a one piece unit with the traversing member. Meyers et al. teaches as depicted in figure 4 that the interlocking bracket (traversing member) is a one piece unit with the end portions (blocking members).

Below is a figure of the prior art Meyers et al.:

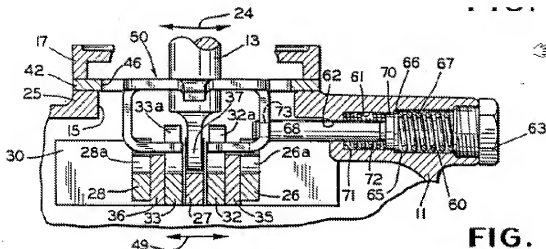


FIG. 3

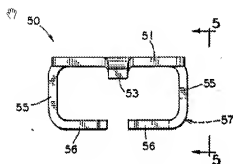


FIG. 4

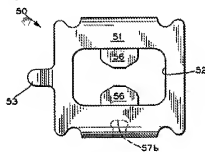


FIG. 6

8. Claims 1, 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Okubo et al. (US patent 4608877).

*Regarding claim 1, Okubo et al. discloses a similar device comprising:*

- a cassette housing (fig.1, housing unit, housing element 10) comprising bearing means (fig.1, 11 and 7) for movably supporting at least one shift element (fig.1, 12 and 13) for engaging and moving the shift rails



and a coupling (fig.1 bolts on the body of the shift element) for connecting the shift element to a shift finger (fig.1, 10); and

- mounting means (fig.1, housing is connected to the transmission housing) for fixedly securing the cassette housing on a transmission housing in a position where the at least one shift element can be moved to selectively engage connecting members of the shift rails;
- wherein the bearing means comprises a traversing member (fig.1, 7 and 11) located in the cassette housing and movable in a first orthogonal direction for selecting a shift rail, and a carrier member (fig.1, the body of element 12 and 13 which surrounds shaft 7) supported by the traversing member and moveable in a second orthogonal direction for axially moving a selected one of the shift rails and being provided with the at least one shift element at one side thereof, the carrier member being provided with a coupling (fig.1, the screws on the carrier member) for connecting the carrier member to a shift finger in the first orthogonal direction and the second orthogonal direction.

***Regarding claim 21,***

Okubo et al. discloses two shift elements having the shape of tongues (fig.1, 12, 13) which extend into shift rail connecting members and being spaced apart in the first orthogonal direction.

***Regarding claim 22,***

Okubo et al. discloses the distance between the tongues or shift fingers being greater than the width of the connecting elements (fig.1, 5a). of the shift rails.

***Regarding claim 23,***

Okubo et al. discloses at least three shift rails (fig.1, 1,4,5), two of them arranged in close distance so that, if one tongue is in regular registration with the connecting element of the selected shift rail, the other connecting element remains within the void between the tongues (see fig.1).

***Regarding claim 24,***

Okubo et al. discloses two of the shift rails being arranged in a far distance (fig.1, 3 and 1) so that if one tongue is in registration with the connecting element of a selected shift rail, the other tongue is not in registration with the connecting element of the other shift rail (see fig.1).

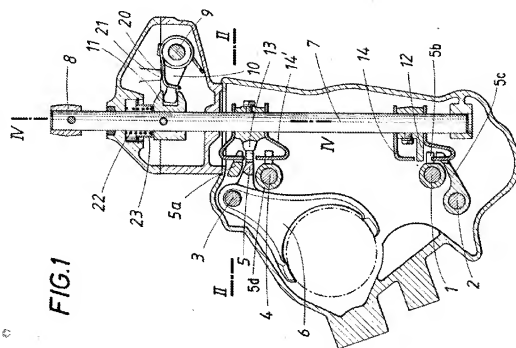


Figure vi- Okubo et al.'s figure.

9. Claims 1, 27, 29, 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishida et al. (USP 4580457).

**Regarding claim 27,**

Ishida et al. discloses a similar device comprising:

- a gear shifting mechanism comprising an actuation unit (fig.1,11) which has an actuation unit housing (fig.2, outer housing adjacent casing 1) capable of being mounted on the transmission housing. The actuation unit also has a shift finger (fig.1, 7) which is movable in two axial directions for both selecting a shift rail and moving it.

- a gear shifting cassette housing (fig.1, 1) having a mounting means (fig.1 or 2, bottom half of housing which can be fixed to transmission) for fixing the housing together with the transmission housing.
- a traversing member (fig.1, 232) located on the cassette housing and movable in the first orthogonal direction,
- the carrier member (fig.2, 331) being supported by the traversing member and movable in the axial direction and being provided with the shift elements (fig.2, 4) at one side thereof protruding through an opening provided in the cassette housing (see fig.2) and engaging with a shift rail connecting member (fig.2, recess on shift rail 6b), the carrier member being provided with a coupling (fig.2, coupling connecting 331 to 7) for connecting the carrier member to the shift finger in the first orthogonal direction and the axial direction.

***Regarding claims 29 and 30,***

Ishida et al. discloses wherein neither the traversing member nor the carrier member rotate to move the shift finger (fig.1 and fig.2, both members move linearly and do not rotate to the shift finger).

***Response to Arguments***

Art Unit: 3656

10. Applicant's arguments filed 08/25/2008 have been fully considered but they are not persuasive. Regarding claims 1 and 27, the rotation of the carrier member would indeed create axial movement since any discrete end points on the carrier member would move axially during the rotating or pivoting movement. If one were to look at an imaginary point on the carrier member near its connection to the shift element, and plotting that point along a line defining the axial direction, then it would be clear that the point moves in axial direction and consequently the carrier member does as well. The prior art still reads on the claims as broadly recited.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS DIAZ whose telephone number is (571)270-5461. The examiner can normally be reached on Monday-Friday 8:30am to 5:30pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Thomas Diaz/  
Examiner, Art Unit 3656

/Richard WL Ridley/  
Supervisory Patent Examiner, Art Unit 3656